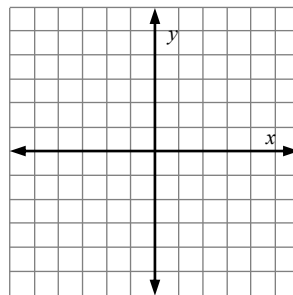
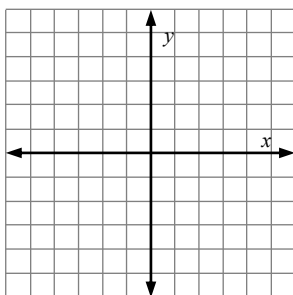


Lesson 5.1.1 Inverse and Direct Variation

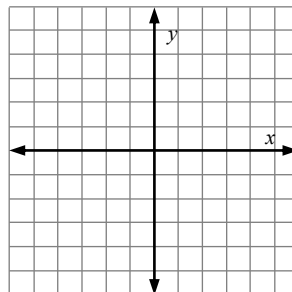
1. If y varies directly as $(x-1)$ and $f(4)=4$, find $f(-2)$.
2. If y varies directly as (x^2+2x) and $f(5)=9$, find $f(-1)$.
3. If y varies inversely as $(x+1)$ and $f(-3)=\frac{5}{9}$, find $f(3)$.
4. If y varies inversely as (x^3-1) and $f(-1)=\frac{7}{4}$, find $f(\frac{1}{2})$.

Lesson 5.1.2 Transformations of Rational Functions

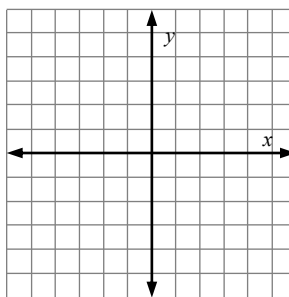
1. Sketch the graph of $f(x)=\frac{1}{x+2}-1$.
2. Sketch the graph of $f(x)=\frac{1}{x-4}-2$.



3. Rewrite $f(x)=\frac{2x+5}{x+2}$ as a transformation of $g(x)=\frac{1}{x}$ and sketch the graph of $f(x)$.



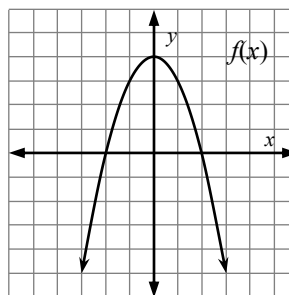
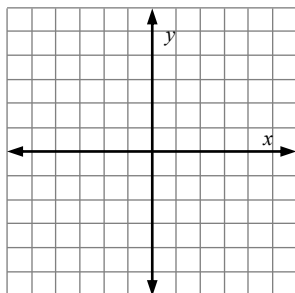
4. Rewrite $f(x) = \frac{3x-7}{x-3}$ as a transformation of $g(x) = \frac{1}{x}$ and sketch the graph of $f(x)$.



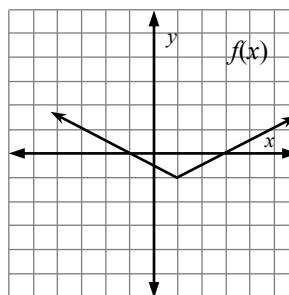
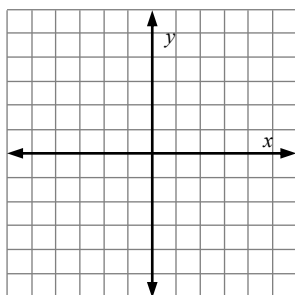
5. Write the equation of a rational function that has a horizontal asymptote at $y = 13$ and a vertical asymptote at $x = -2$.
6. Write the equation of a rational function that has a horizontal asymptote at $y = -12$ and a vertical asymptote at $x = 9$.

Lesson 5.1.3 Graphing Reciprocals of Functions

1. Given $f(x)$ shown at right, sketch the graph of $\frac{1}{f(x)}$.



2. Given $f(x)$ shown at right, sketch the graph of $\frac{1}{f(x)}$.



3. Given $f(x)$ shown at right, sketch the graph of $\frac{1}{f(x)}$.

